

REMARKS

Reconsideration of the present application is respectfully requested.

Summary of the Office Action

Claims 90-96 were rejected under 35 U.S.C. § 112 second paragraph, as being indefinite. Claims 79-96 were rejected under 35 U.S.C. § 103(a) as being unpatentable based on U.S. Patent number 6,651,103 of Markowitz et al. ("Markowitz") in view of U.S. Patent Application Publication No. 2002/0169926 of Pinckney et al. ("Pinckney").

Summary of Interview

Applicants thank the Examiner for the courtesy shown during the telephone interview between the Examiner and Applicants' representative (the undersigned) on 5/7/2008. Applicants presented arguments which are reflected in substantial part in the remarks below. Although no particular agreement was reached, the Examiner did not express disagreement with Applicants' arguments.

Summary of Amendments

In this response, claims 79, 84, 86, 90 and 95 have been amended. The amendments are made for the purpose of conforming the language in the claims more closely to the language in the disclosure of the present application to provide greater clarity, not in response to the rejections. No new matter has been added.

No claims have been added or canceled in this amendment.

Therefore, claims 79-96 are now pending.

Discussion of Rejections

The present invention is thought to be novel and non-obvious at least because it includes a network caching system that includes both a protocol *dependent* caching subsystem *and* a protocol *independent* caching subsystem that is distinct from the protocol dependent caching subsystem (see, e.g., specification at paragraphs [75] and [76]; Fig. 3). This architecture is advantageous in that (among other reasons) separation of the relatively few functions directed to protocol specific operations from the storage/retrieval functions allows the storage/retrieval functions to be generalized and optimized, without consideration of streaming protocol or encoding format (specification, para. [105]).

The protocol dependent caching subsystem includes a plurality of streaming media encoders for different streaming media protocols (specification at para. [107]) and is generally responsible for interacting with an upstream server to obtain streaming media data.

The protocol *independent* caching subsystem is responsible for storing and retrieving streaming media data to and from (respectively) non-volatile storage in the cache. The protocol *independent* caching subsystem manages the flow of streaming media data to and from the operating system of the cache system in a streaming media protocol independent manner (specification, para. [105]); *however*, it stores the streaming

media with *streaming media protocol specific* metadata, in a form which is *encapsulated in network protocol* so as to be optimized for delivery to the client (see, e.g., specification at paragraphs [64], [70], [75], [76] and [100]). The protocol independent caching subsystem also is responsible for *pacing* delivery of streaming media data to a client (see, e.g., specification at paragraph [107]).

Referring now to independent claim 79, Applicants respectfully submit that the cited references do not disclose or suggest an apparatus such as claimed, either individually or in combination. In this regard, Applicants respectfully submit the following five points, each of which by itself is believed to be sufficient to overcome the present rejection.

First, there is no disclosure or suggestion in the cited references of a network caching system that includes *both* a protocol dependent subsystem *and* a protocol independent subsystem. The Office cites Markowitz as disclosing a protocol dependent subsystem and Pinkney as disclosing a protocol independent subsystem. Applicants understand that the Office is *combining* Markowitz and Pinckney in this regard. However, part of the ingenuity behind the present invention is in the inventors' *recognizing* the fact that certain functions of a network cache (e.g., the protocol specific functions) could be *separated* from other functions (e.g., the storage/retrieval functions), to provide better performance. The systems disclosed in Markowitz and Pinckney are *complete* caching systems, i.e., each has data storage/retrieval functionality *and* client/origin server interaction functionality. Assuming any combination could be made of their teachings, such combination would produce a

system that comprises *two redundant complete caching systems*, one being protocol dependent and the other being protocol independent (according to the Office's interpretation), in contrast with the present invention in which (previously intertwined) functions are *separated* but interact with each other, in the same caching system.

Second, it is not apparent to Applicants that Markowitz discloses a protocol *dependent* caching subsystem, as the Office asserts. Nonetheless, even if it does (i.e., assuming *arguendo*), Pinkney also only discloses a protocol *dependent* subsystem, *not* a protocol independent subsystem. Pinckney does not disclose or suggest a network caching system in which the functionality which interacts with the cache's storage facility has been separated out from the functionality which interacts with the upstream server and where the former has been implemented to operate in a protocol *independent* manner. Insofar as Pinckney discloses, the network communication functionality and the cache read/write functionality are *intertwined* and, therefore, protocol *dependent*.

Third, in contrast with claim 79 as amended, Applicants find no disclosure in the cited references of a protocol *independent* subsystem that stores streaming media data in a form that is *encapsulated in a network protocol to be optimized for delivery to the client system*, and that stores *streaming protocol specific metadata* with the streaming media data in the mass storage facility (support for the above amendment adding this limitation can be found in Applicants' specification in, e.g., paragraphs [64], [70], [75], [76] and [100]).

Fourth, there is no disclosure in the cited references of a protocol *dependent* subsystem that includes *a plurality of streaming media encoders* to support a plurality of

streaming media protocols. Markowitz discloses providing multiple versions of a particular set of media data, encoded for *different bandwidth requirements* of user device connections (col. 3, lines 51-57; col. 4, lines 19-27). However, different bandwidth encodings as disclosed in Markowitz do not equate to or imply different *streaming media protocols*.

Fifth, accepting the Examiner's interpretation of Markowitz for the sake of argument, there is no disclosure in the cited references of a protocol *independent* subsystem that *controls the pace of delivery* of streaming media data. The Office cites Markowitz at col. 6, lines 4-17 as disclosing this feature (Office Action, page 8, lines 1-3); however, the Office also asserts that Markowitz discloses a protocol *dependent* subsystem (Office Action, page 7, line 9) and *not* a protocol independent subsystem. It would not be obvious, based on Markowitz or any other cited reference, to provide a protocol *independent* subsystem that controls the pace of delivery of streaming media data to a client.

For at least the above reasons, therefore, Applicants respectfully submit that claim 79 and all claims which depend on it are patentable over the cited.

Independent claims 86 and 90 include limitation similar to those in claim 79 discussed above and, therefore, are also thought to be patentable over the cited art along with their dependent claims, for similar reasons.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent

claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

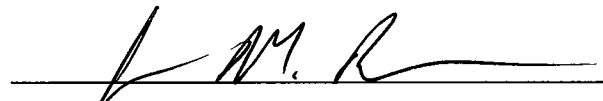
CONCLUSION

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges, please charge Deposit Account No. 50-2207.

Respectfully submitted,
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